

CLAIMS

1. A disassembling method for disassembling a washing machine,
the washing machine including:

5 a vessel formed of resin;
a driven unit making a rotational movement in said vessel; and
a drive unit connected through a coupling rod to said driven unit and disposed
on the outside of said vessel, and

10 the method comprising a release step of applying force, along the axial direction
of said coupling rod, in the direction of separating said drive unit and said driven unit
from each other to release the connection between said drive unit and said driven unit.

2. The disassembling method for the washing machine according to claim 1,
wherein

15 in said release step, said drive unit is held, pressed or caught and said driven unit
is held, pressed or caught to separate said drive unit and said driven unit away from each
other.

20 3. The disassembling method for the washing machine according to claim 1,
wherein

in said release step, said drive unit is held, pressed or caught and said vessel is
held, pressed or caught to separate said drive unit and said vessel away from each other.

25 4. The disassembling method for the washing machine according to claim 3,
wherein

in said release step, said drive unit is caught and moved while a bottom surface
of said vessel is pressed in the direction opposite to the direction of the movement of
said drive unit.

5. The disassembling method for the washing machine according to claim 4,
wherein

5 in said release step, a member having its leading end in the shape of a rod or its
leading end in the shape of a plate catches said drive unit and force is applied to said
member.

6. The disassembling method for the washing machine according to claim 1,
wherein

10 said vessel includes a water tub,
said drive unit includes at least one of a motor and a reduction-gear unit, and
said driven unit includes at least one of a dehydration tub and a pulsator.

7. The disassembling method for the washing machine according to claim 1,
15 the method comprising, prior to said release step, at least one of the step, in a case
where said vessel and said drive unit are in contact with and coupled to each other, of
releasing the coupling between said vessel and said drive unit, the step, in a case where
said vessel and said drive unit are secured through a metal component, of releasing
coupling between said metal component and said drive unit, and the step of releasing
20 coupling between said metal component and said vessel.

8. The disassembling method for the washing machine according to claim 1,
the method comprising, after said release step, the step of removing oil leaking from said
drive unit.

25 9. A disassembling apparatus for disassembling a washing machine,
the washing machine including:
a vessel formed of resin;

a driven unit making a rotational movement in said vessel; and
a drive unit connected through a coupling rod to said driven unit and disposed
on the outside of said vessel, and

the apparatus comprising separating means for applying force, along the axial
5 direction of said coupling rod, in the direction of separating said drive unit and said
driven unit from each other.

10. The disassembling apparatus for the washing machine according to claim 9,
wherein

10 said separating means includes:
drive-unit holding means for holding said drive unit;
driven-unit holding means for holding said driven unit; and
first moving means for moving, along said axial direction, at least one of said
drive-unit holding means and said driven-unit holding means.

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11. The disassembling apparatus for the washing machine according to claim
10, wherein

said drive-unit holding means is formed in an upper portion, and
said drive-unit holding means is formed to hold said drive unit from above when
20 said vessel is disposed with said drive unit on an upper side.

12. The disassembling apparatus for the washing machine according to claim 9,
wherein

25 said separating means includes:
drive-unit grasping means for catching said drive unit;
driven-unit holding means for holding said driven unit; and
second moving means for moving, along said axial direction, at least one of said
drive-unit grasping means and said driven-unit holding means.

13. The disassembling apparatus for the washing machine according to claim 12, wherein

said drive-unit grasping means is formed in an upper portion, and

said drive-unit grasping means is formed to catch said drive unit from above when said vessel is disposed with said drive unit on an upper side.

14. The disassembling apparatus for the washing machine according to claim 12, wherein

said drive-unit grasping means includes an open/close hook formed to freely open and close, and said open/close hook has a leading end for catching said drive unit.

15. The disassembling apparatus for the washing machine according to claim 14, wherein

said leading end is formed to be detachable.

16. The disassembling apparatus for the washing machine according to claim 14, wherein

said drive-unit grasping means includes a hook drive unit for pressing said open/close hook in the direction of closing said open/close hook, and

said hook drive unit is formed to contact said open/close hook without being connected and secured to said open/close hook.

17. The disassembling apparatus for the washing machine according to claim 9, wherein

said separating means includes:

drive-unit holding means for holding said drive unit;

vessel holding means for holding said vessel; and

third moving means for moving, along said axial direction, at least one of said drive-unit holding means and said vessel holding means.

5 18. The disassembling apparatus for the washing machine according to claim 17, wherein

said drive-unit holding means is formed in an upper portion, and

said drive-unit holding means is formed to hold said drive unit from above when said vessel is disposed with said drive unit on an upper side.

10 19. The disassembling apparatus for the washing machine according to claim 9, wherein

said separating means includes:

drive-unit grasping means for catching said drive unit;

vessel pressing means for pressing said vessel; and

15 fourth moving means for moving, along said axial direction, at least one of said drive-unit grasping means and said vessel pressing means.

20 20. The disassembling apparatus for the washing machine according to claim 19, wherein

said drive-unit grasping means is formed in an upper portion, and

said drive-unit grasping means is formed to catch said drive unit from above when said vessel is disposed with said drive unit on an upper side.

25 21. The disassembling apparatus for the washing machine according to claim 19, wherein

said drive-unit grasping means includes an open/close hook formed to freely open and close, and said open/close hook has a leading end for catching said drive unit.

22. The disassembling apparatus for the washing machine according to claim 21, wherein
said leading end is formed to be detachable.

5 23. The disassembling apparatus for the washing machine according to claim 21, wherein
said drive-unit grasping means includes a hook drive unit for pressing said open/close hook in the direction of closing said open/close hook, and
said hook drive unit is formed to contact said open/close hook without being
10 connected and secured to said open/close hook.

24. The disassembling apparatus for the washing machine according to claim 19, wherein
said vessel pressing means is formed to press said vessel toward one of the sides
15 in said axial direction, and
said drive-unit grasping means is formed to move toward the other side.

25. The disassembling apparatus for the washing machine according to claim 24, wherein
20 said vessel pressing means includes a press rod formed to press a bottom portion of said vessel to be disposed.

26. The disassembling apparatus for the washing machine according to claim 25, wherein
25 said press rod is formed to be movable to change the position where said bottom portion is pressed.

27. The disassembling apparatus for the washing machine according to claim

25, wherein

said press rod has a press plate whose shape in plan view is a sector, at a portion where said press rod presses said bottom portion.

5 28. The disassembling apparatus for the washing machine according to claim 9, said apparatus comprising a table for disposing an object to be disassembled, wherein said table is formed to have a movable mount surface.

10 29. The disassembling apparatus for the washing machine according to claim 9, wherein said separating means is formed to apply said force of at least 670 kg and at most 940 kg.

15 30. The disassembling apparatus for the washing machine according to claim 9, said apparatus comprising a shatterproof plate formed to surround said separating means.

 31. A recycled resin recovered using the disassembling apparatus for the washing machine as recited in claim 9.

20 32. A resin product formed of the recycled resin as recited in claim 31.